

WHAT IS CLAIMED IS

1. An online communication schema for an online vehicle ordering and tracking system, comprising:

a search request message including:

at least one search criteria; and

a weighting of each criterion;

a search reply message including:

a list of vehicles substantially matching the at least one search criteria; and

a plurality of vehicle configuration parameters of the vehicles substantially matching the search criteria, including make, model, dealer identifier, price, and color.

2. The communication schema, as set forth in claim 1, wherein the search request and reply messages are in XML.

3. The communication schema, as set forth in claim 1, wherein the search request message comprises:

a request tag;

a criteria tag; and

a criterion tag providing a dealer identifier.

4. The communication schema, as set forth in claim 3, wherein the search request message further comprises:

the criterion tag providing an enumeration of a plurality of attributes each specifying a vehicle configuration parameter, including make, model, and year;

a close criterion tag;

a close criteria tag; and

a close request tag.

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5. The communication schema, as set forth in claim 4, wherein the criterion tag further including:

a requirement attribute indicative of whether the criterion is required; and

5 a weight attribute indicate of a search weighting of the criterion.

6. The communication schema, as set forth in claim 1, wherein a vehicle parameter of the search reply
10 message comprise:

a vehicle identifier;

a vehicle status;

a dealer identifier;

a list of configured model parameters, including:

15 a price;

a make;

a model;

an engine specification;

a transmission specification; and

20 an exterior paint color.

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7. The communication schema, as set forth in claim 1, wherein a vehicle parameter of the search reply message comprise:

a vehicle identifier;

5 a vehicle status;

a dealer identifier;

a list of configured model parameters, including:

a price;

a make;

10 a model;

an engine specification;

a transmission specification;

an exterior paint color;

a wheel specification;

15 a tire specification;

a seat fabric specification;

an interior color; and

an audio system specification.

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8. The communication schema, as set forth in claim 1, wherein a vehicle parameter of the search reply message comprise:

- 5 a vehicle identifier;
- a vehicle status;
- a dealer identifier;
- a list of configured model parameters, including:
 - 10 a price;
 - a make;
 - 10 a model;
 - an engine specification;
 - a transmission specification;
 - an exterior paint color;
 - a wheel specification;
 - 15 a tire specification;
 - a seat fabric specification;
 - an interior color;
 - an audio system specification;
 - a drive specification;
 - 20 a cab specification;
 - a body style specification;
 - a real axle ratio specification;
 - a pay load package specification;
 - a wheel base specification;
 - 25 a roof color;
 - a door specification;
 - an accent color;
 - a spare tire specification;
 - a PEP specification;
 - 30 an option package specification; and
 - a stand alone package specification.

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July 37 9. The communication schema, as set forth in claim 1, further comprising:

a tag request message including:

5 order information associated with the tag request;

contact information of the user;

credit authorization information; and

tagged vehicle parameters.

10 10. The communication schema, as set forth in claim 9, wherein the order information comprises:

a source identifier associated with the web site from which the tag request originated;

15 a session identifier of the online session during which the tag request was submitted;

an order number;

an order total price;

a deposit amount;

an order date;

20 an order time;

a dealer identifier; and

a payment method.

25 11. The communication schema, as set forth in claim 9, wherein the contact information comprises:

a customer identifier;

a customer name;

a customer address;

a customer email address;

30 a customer daytime telephone number;

a customer evening telephone number;

a customer facsimile number; and

a specification of a best way to contact the customer.

12. The communication schema, as set forth in claim 9, wherein the credit card authorization information comprises a credit card authorization number.

5 *Amended* 13. The communication schema, as set forth in claim 9, wherein the tagged vehicle parameters comprises:

a vehicle identifier;

a stock number;

an item number;

10 an order line number;

a plurality of vehicle configuration parameters;

a dealer identifier of a dealer having the tagged vehicle in inventory;

15 a dealer identifier of a dealer selected by the user from whom to purchase the tagged vehicle;

a vehicle initial status indicative of whether the vehicle is new or used; and

a locate search identifier specifying the selected vehicle configuration.

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14. The communication schema, as set forth in claim 13, wherein the plurality of vehicle configuration parameters comprises:

5 a price;
a make;
a model;
an engine specification;
a transmission specification;
an exterior paint color;
10 a wheel specification;
a tire specification;
a seat fabric specification;
an interior color;
an audio system specification;
15 a drive specification;
a cab specification;
a body style specification;
a real axle ratio specification;
a pay load package specification;
20 a wheel base specification;
a roof color;
a door specification;
an accent color;
a spare tire specification;
25 a PEP specification;
an option package specification; and
a stand alone package specification.

30 *Dep 357* 15. The communication schema, as set forth in claim 9, further comprising a tag status message generated in response to processing a tag request message.

16. The communication schema, as set forth in claim 15, wherein the tag status message comprises:

5 an order number;
 an order line number;
 an item number;
 a model year;
 a dealer identifier;
 a body style;
10 an order status;
 an action code;
 an order receipt date;
 an order process date; and
 an order process time.

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Def 17 17. A communication schema used in an online system enabling a user to search in-inventory and in-process products, comprising:

a search request message including:

5 at least one search criteria describing the parameters of a desired product; and

a weighting of each criterion;

a search reply message including:

10 a list of products substantially matching the search criteria; and

a plurality of product configuration parameters of the products substantially matching the search criteria;

a tag request message including:

15 order information associated with the tag request;

contact information of the user;

credit authorization information; and

tagged product parameters; and

20 a tag status message generated in response to processing the tag request message.

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18. The communication schema, as set forth in claim 17, wherein the product is a vehicle and the search request message comprises:

- a request tag;
- 5 a criteria tag;
- a criterion tag providing an enumeration of a plurality of attributes each specifying a vehicle configuration parameter, including VIN, dealer identifier, make, model, year, engine data, transmission
- 10 data, tire data, exterior color, interior color, roof color, seat fabric, accent color, option, MSRP, body style, vehicle type, category, price, condition, wheel data, and audio system data;
- a close criterion tag;
- 15 a close criteria tag; and
- a close request tag.

19. The communication schema, as set forth in claim 18, wherein the criterion tag further including:

- 20 a requirement attribute indicative of whether the criterion is required; and
- a weight attribute indicate of a search weighting of ~~the criterion~~

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20. The communication schema, as set forth in claim 17, wherein a vehicle parameter of the search reply message comprise:

- a vehicle identifier;
- 5 a vehicle status;
- a dealer identifier;
- a list of configured model parameters, including:
 - a price;
 - a make;
 - 10 a model;
 - an engine specification;
 - a transmission specification; and
 - an exterior paint color.

21. The communication schema, as set forth in claim 17, wherein a vehicle parameter of the search reply message comprise:

- a vehicle identifier;
- a vehicle status;
- 20 a dealer identifier;
- a list of configured model parameters, including:
 - a price;
 - a make;
 - a model;
 - 25 an engine specification;
 - a transmission specification;
 - an exterior paint color;
 - a wheel specification;
 - a tire specification;
 - 30 a seat fabric specification;
 - an interior color; and
 - an audio system specification.

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22. The communication schema, as set forth in claim 17, wherein a vehicle parameter of the search reply message comprise:

- a vehicle identifier;
- 5 a vehicle status;
- a dealer identifier;
- a list of configured model parameters, including:
 - a price;
 - a make;
 - 10 a model;
 - an engine specification;
 - a transmission specification;
 - an exterior paint color;
 - a wheel specification;
 - 15 a tire specification;
 - a seat fabric specification;
 - an interior color;
 - an audio system specification;
 - a drive specification;
 - 20 a cab specification;
 - a body style specification;
 - a real axle ratio specification;
 - a pay load package specification;
 - a wheel base specification;
 - 25 a roof color;
 - a door specification;
 - an accent color;
 - a spare tire specification;
 - a PEP specification;
 - 30 an option package specification; and
 - a stand alone package specification.

23. The communication schema, as set forth in claim 17, further comprising:

a tag request message including:

order information associated with the tag request;

contact information of the user;

credit authorization information; and

tagged vehicle parameters.

10 ⁸⁸⁷ 24. The communication schema, as set forth in claim 23, wherein the order information comprises:

a source identifier associated with the web site from which the tag request originated;

15 a session identifier of the online session during which the tag request was submitted;

an order number;

an order total price;

a deposit amount;

an order date;

20 an order time;

a dealer identifier; and

a payment method.

25 25. The communication schema, as set forth in claim 23, wherein the contact information comprises:

a customer identifier;

a customer name;

a customer address;

a customer email address;

30 a customer daytime telephone number;

a customer evening telephone number;

a customer facsimile number; and

a specification of a best way to contact the customer

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26. The communication schema, as set forth in claim 23, wherein the credit card authorization information comprises a credit card authorization number.

27. The communication schema, as set forth in claim 23, wherein the tagged vehicle parameters comprises:

a vehicle identifier;

a stock number;

an item number;

an order line number;

a plurality of vehicle configuration parameters;

a dealer identifier of a dealer having the tagged vehicle in inventory;

a dealer identifier of a dealer selected by the user from whom to purchase the tagged vehicle;

a vehicle initial status indicative of whether the vehicle is new or used; and

a locate search identifier specifying the selected vehicle configuration.

28. The communication schema, as set forth in claim 27, wherein the plurality of vehicle configuration parameters comprises:

5 a price;
a make;
a model;
an engine specification;
a transmission specification;
an exterior paint color;
10 a wheel specification;
a tire specification;
a seat fabric specification;
an interior color;
an audio system specification;
15 a drive specification;
a cab specification;
a body style specification;
a real axle ratio specification;
a pay load package specification;
20 a wheel base specification;
a roof color;
a door specification;
an accent color;
a spare tire specification;
25 a PEP specification;
an option package specification; and
a stand alone package specification.

29. The communication schema, as set forth in claim 30 23, further comprising a tag status message generated in response to processing a tag request message.

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30. The communication schema, as set forth in claim 29, wherein the tag status message comprises:

5 an order number;
 an order line number;
 an item number;
 a model year;
 a dealer identifier;
 a body style;
10 an order status;
 an action code;
 an order receipt date;
 an order process date; and
 an order process time.

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31. An online method of communication for an online product ordering and tracking system, comprising:

generating a search request message including at least one search criteria, the search criteria including a retailer identifier, and a weighting of each criterion;

and
generating a search reply message in response to processing the search request message, the search reply message including a list of products substantially matching the search criteria, including products in-inventory at the retailer identified by the retailer identifier as well as products in-transit to the retailer and in-process products.

32. The communication method, as set forth in claim 31, wherein generating the search request message comprises generating an XML message.

33. The communication method, as set forth in claim 31, wherein generating the search reply message comprises generating an XML message.

Part 10 > 34. The communication method, as set forth in claim 31, wherein generating the search request message comprises generating the search request message having:

- 5 a vehicle identifier;
- a vehicle status;
- a dealer identifier;
- a list of configured model parameters, including:
 - 10 a price;
 - a make;
 - 10 a model;
 - an engine specification;
 - a transmission specification; and
 - an exterior paint color.

15 35. The communication method, as set forth in claim 31, wherein generating the search reply message comprises generating vehicle parameters including:

- 20 a vehicle identifier;
- a vehicle status;
- 20 a dealer identifier;
- a list of configured model parameters, including:
 - 25 a price;
 - a make;
 - a model;
 - 25 an engine specification;
 - a transmission specification;
 - an exterior paint color;
 - a wheel specification;
 - a tire specification;
 - 30 a seat fabric specification;
 - an interior color; and
 - an audio system specification.

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36. The communication method, as set forth in claim 31, wherein generating the search reply message comprise incorporating:

- 5 a vehicle identifier;
- a vehicle status;
- a dealer identifier;
- a list of configured model parameters, including:
 - 10 a price;
 - a make;
 - a model;
 - an engine specification;
 - a transmission specification;
 - an exterior paint color;
 - 15 a wheel specification;
 - a tire specification;
 - a seat fabric specification;
 - an interior color;
 - an audio system specification;
 - a drive specification;
 - 20 a cab specification;
 - a body style specification;
 - a real axle ratio specification;
 - a pay load package specification;
 - a wheel base specification;
 - 25 a roof color;
 - a door specification;
 - an accent color;
 - a spare tire specification;
 - a PEP specification;
 - 30 an option package specification; and
 - a stand alone package specification.

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37. The communication method, as set forth in claim 31, further comprising:

generating a tag request message including:

order information associated with the tag request;

contact information of the user;

credit authorization information; and

tagged vehicle parameters.

10 38. The communication method, as set forth in claim 37, wherein generating the tag request message comprises incorporating order information, comprising:

a source identifier associated with the web site from which the tag request originated;

15 a session identifier of the online session during which the tag request was submitted;

an order number;

an order total price;

a deposit amount;

20 an order date;

an order time;

a dealer identifier; and

a payment method.

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39. The communication method, as set forth in claim 37, wherein generating tag request message comprises incorporating the contact information comprising:

5 a customer identifier;
a customer name;
a customer address;
a customer email address;
a customer daytime telephone number;
a customer evening telephone number;
10 a customer facsimile number; and
a specification of a best way to contact the customer.

40. The communication method, as set forth in claim 15 37, wherein generating the tag request message comprises incorporating a credit card authorization number.

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41. The communication method, as set forth in claim 20 37, wherein generating the tag request message comprises incorporating the tagged vehicle parameters comprising:

a vehicle identifier;
a stock number;
an item number;
an order line number;
25 a plurality of vehicle configuration parameters;
a dealer identifier of a dealer having the tagged vehicle in inventory;
a dealer identifier of a dealer selected by the user from whom to purchase the tagged vehicle;
30 a vehicle initial status indicative of whether the vehicle is new or used; and
a locate search identifier specifying the selected vehicle configuration.

42. The communication method, as set forth in claim 41, wherein generating the tag request message comprises incorporating the plurality of vehicle configuration parameters comprising:

- 5 a price;
- a make;
- a model;
- an engine specification;
- a transmission specification;
- 10 an exterior paint color;
- a wheel specification;
- a tire specification;
- a seat fabric specification;
- an interior color;
- 15 an audio system specification;
- a drive specification;
- a cab specification;
- a body style specification;
- a real axle ratio specification;
- 20 a pay load package specification;
- a wheel base specification;
- a roof color;
- a door specification;
- an accent color;
- 25 a spare tire specification;
- a PEP specification;
- an option package specification; and
- a stand alone package specification.

30 43. The communication method, as set forth in claim 37, further comprising generating a tag status message in response to processing the tag request message.

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44. The communication method, as set forth in claim 43, wherein the generating the tag status message comprises:

- incorporating an order number;
- 5 incorporating an order line number;
- incorporating an item number;
- incorporating a model year;
- incorporating a dealer identifier;
- incorporating a body style;
- 10 incorporating an order status;
- incorporating an action code;
- incorporating an order receipt date;
- incorporating an order process date; and
- 15 incorporating an order process time.

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corresponding to the product ~~configuration~~ data;

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displaying the list of products.

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compiling a list of products and respective configuration data; and

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47. The method, as set forth in claim 45, further comprising:

receiving a search request document containing search criteria and converting to an XML document having
5 a predetermined format; and

converting the XML document to an XML search request
message

10 48. The method, as set forth in claim 45, further comprising:

displaying product configuration information to the user on a web page;

receiving product configuration selection from the user; and

15 displaying a search result list of products substantially matching the configuration and percentage matching data on a web page.

20 49. The method, as set forth in claim 45, further comprising:

importing in-inventory product availability data from dealerships; and

importing in-process product availability data from an enterprise database.

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50. The method, as set forth in claim 45, wherein generating the search reply message comprises:

incorporating a unique identifier of each substantially matching product;

5 incorporating configuration data of each substantially matching product; and

10 sorting the substantially matching product by descending degree of match between the product configuration data of the product and the configuration data in the search request message.

51. The method, as set forth in claim 45, further comprising:

15 receiving a tag request message submitted by the user, the tag request message containing a unique product identifier;

modifying the product availability data associated with the product identified by the unique product identifier in the inventory database; and

20 generating a tag reply message confirming the completion of tagging the identified product.

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